

WHAT IS CLAIMED IS:

1. A parts procurement system comprising:  
virtual production line preparation means for preparing a virtual  
production line in which objects manufactured thereon are virtually placed in  
5 sequence based on long-term production plan data covering variable production of the  
objects and fixed production plan data covering fixed production of the objects; and  
parts ordering means for determining parts and the number of the parts  
necessary for manufacturing the objects on the virtual production line prepared by the  
virtual production line preparation means, as well as calculating the parts ordering  
10 timing based on a production timing of the objects and parts delivery lead time.
2. A system according to claim 1, further comprising correction means for  
correcting the virtual production line prepared by the virtual production line  
preparation means according to actual production results of the objects, wherein the  
parts ordering means places a parts order after calculating the parts ordering timing  
15 based on the corrected virtual production line.
3. A system according to claim 2, wherein the correction means changes  
the virtual production line by correcting at least one parameter out of a production  
sequence change, a design change of the object, a production progress, and a parts  
procurement lead time.
- 20 4. A system according to claim 1, wherein the parts ordering means  
places orders based on the calculated parts ordering timing.
5. A system according to claim 1, wherein the parts ordering means  
establishes a communication link with at least one supplier of the parts to order the  
parts.
- 25 6. A system according to claim 1, wherein the fixed production plan data  
relates to production of the objects over a first time period and the long-term  
production plan data relates to production of the objects over a second time period that  
is longer than the first time period.
7. A system according to claim 1, wherein the objects are vehicles.
- 30 8. A system according to claim 7, wherein the vehicles are automobiles.
9. A parts procurement system comprising a controller that:  
prepares a virtual production line in which objects manufactured  
thereon are virtually placed in sequence based on long-term production plan data

covering variable production of the objects and fixed production plan data covering fixed production of the objects; and

determines parts and the number of the parts necessary for manufacturing the objects on the prepared virtual production line, and calculates the parts ordering timing based on a production timing of the objects and parts delivery lead time.

10. A system according to claim 9, wherein the controller corrects the prepared virtual production line according to actual production results of the objects, and places a parts order after calculating the parts ordering timing based on the corrected virtual production line.

11. A system according to claim 10, wherein the controller changes the prepared virtual production line by correcting at least one parameter out of a production sequence change, a design change of the object, a production progress, and a parts procurement lead time.

12. A system according to claim 9, wherein the controller places orders based on the calculated parts ordering timing.

13. A system according to claim 9, wherein the controller establishes a communication link with at least one supplier of the parts to order the parts.

14. A system according to claim 9, wherein the fixed production plan data relates to production of the objects over a first time period and the long-term production plan data relates to production of the objects over a second time period that is longer than the first time period.

15. A system according to claim 9, wherein the objects are vehicles.

16. A system according to claim 15, wherein the vehicles are automobiles.

17. A method of procuring parts comprising:  
preparing a virtual production line in which objects manufactured thereon are virtually placed in sequence based on long-term production plan data covering variable production of the objects and fixed production plan data covering fixed production of the objects;

determining parts and the number of the parts necessary for manufacturing the objects on the prepared virtual production line; and  
calculating the parts ordering timing based on a production timing of the objects and parts delivery lead time.

18. A method according to claim 17, further comprising:

correcting the prepared virtual production line according to actual production results of the objects; and

placing a parts order after calculating the parts ordering timing based on the corrected virtual production line.

5           19.    A method according to claim 18, wherein the prepared virtual production line is changed by correcting at least one parameter out of a production sequence change, a design change of the object, a production progress, and a parts procurement lead time.

10           20.    A method according to claim 17, further comprising placing orders based on the calculated parts ordering timing.

21.    A method according to claim 17, further comprising establishing a communication link with at least one supplier of the parts to order the parts.

15           22.    A method according to claim 17, wherein the fixed production plan data relates to production of the objects over a first time period and the long-term production plan data relates to production of the objects over a second time period that is longer than the first time period.

23.    A method according to claim 17, wherein the objects are vehicles.

24.    A method according to claim 23, wherein the vehicles are automobiles.